

COMPLETE SAMPLE DELIVERY GROUP FILE (CSF) EVIDENCE AUDIT CHECKLIST

U.S. Environmental Protection Agency - Region 8
Environmental Services Division, Multi-Media Branch
Analytical Operations Section

Audit Number: $08-09-08$	site Name: Killandson than	Failir
Date CSF Received: 12/3/07	Site Manager: Kathun	Demade
Received By: Jam Bland	RAS Number: 36948	
Date of Audit: 12/7/07	ULSA Number:	
Audited By Jam Blan	SDG Number: MN23Y/	
Resubmitted CSF? Yes No	Number of Samples: (7/1/5
All Scientific	$\sqrt{}$	24-1
	CLP Lab Code:	
Lab Location: The Wordlands, TX		
AUDIT CHECK	CLIST	
CHAIN OF CUSTODY		,
1. Custody Seal Present?	Yes	No
2. Condition of Seal? Intact	Signed Broken Unsi	Lgned
3. Chain of Custody Record(s) Present?	Yes	No
4. Chain of Custody Record(s) Signed?	Yes	
5. Chain of Custody Record(s) Dated?	Yes	/ No
6. Traffic Report(s) or Packing List(s	s) Present? Yes	No
7. Traffic Report(s) or Packing List(s	s) Signed? Yes \(\frac{1}{2}\)	No
8. Airbill Present?	Yes_\	No
9. Airbill Number(s):795506075449	<u> </u>	
10. Airbill Signed?	Yes	No
11. Airbill Dated?	Yes <u> </u>	_, No
12. Sample Tags Present?	Yes	No_
13. Should Sample Tags be Present?	Yes <u> </u>	No_
\mathbb{F}_{n} . The second of \mathbb{F}_{n}	· · · · · · · · · · · · · · · · · · ·	

FORM DC-2 Form DC-2 Present? 14. 15. Numbering Scheme on Form DC-2 Correct? Yes No Enclosed Documents Listed? 16. No Yes Listed Documents Enclosed? 17. Yes No FORM DC-1 18. Form DC-1 Present? Yes No Form DC-1 Complete? 19. Yes No 20. Form DC-1 Correct? Yes No DOCUMENT CONTROL Laboratory Documents Complete? Yes 21. Laboratory Documents Legible? 'No 22. Original Documents Included in CSF? No 23. ATA INSPECTION Form I's present (for each analytical fraction 4. as defined by the Traffic Report/Chain of Custody Yes Record)? 5. Forms 2 through 8 (VOC & SVOC), Forms 2 through 10 (Pesticides), Forms 2 through 14 (Metals & Cyanide) _present? Yes 5. Raw data present (for each analytical fraction as defined by the Traffic Report/Chain of Custody Record)? Yes Percent Solids Form present for soil samples? Yes No TE: If items 1, 3, 4, 6, 7, 8, 12, 14, 18, or 22 are missing, rrective action measures must be taken by the CSF auditor and mmarized below.

AUDIT NUMBER: 08

•:		78	200	1-0	∇
DDIT	NUMBER:	$\bigcup G$			<u>U</u>

OMMENTS		

Auditor

12/7/07

Date

EPA OFFICIAL SEALS PAGE

Please attach all custody seals below:



CASE #36948 SDG #: MHQ3Y/
SITE NAME: Pickardson that Tailing
DATE: 12/17/07

AUDIT NUMBER: 08-09-08

Audst - 08-09-08
RAS - 36948
SD6 - MH23YI
Site - Richardson Hutter
RPM - Kathan Hernandey
LAB - A-4

USEPA-CLP

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ab Name: 1	A4 Sci	entific, Inc.	_ Contract: El	2W06057		
ab Code:	A4	Case No: 36948	NRAS No.:		SDG No: MH	23Y1
OW No.:	ILM05	.4	•	· · · · · · · · · · · · · · · · · · ·		
•		EPA Sample No.	Lab Sam	nle ID		•
		MH23Y1	000871		 	
		MH23Y1D	000871			
		MH23Y1S	000871			
		MH23Z6	000871			
		MH23Z7	000871			
		MH23Z8	000871		<u>-</u>	
		MH23Z9	000871			
		MH24A0	000871	2-06		
		•	,			
		-			• .	
				•		,
					ICP-AES	ICP-MS
Were ICP-AES	and I	CP-MS interelement correction	ıs	(Yes/No)	YES	YES
Were ICP-AES	S and I	CP-MS background corrections		(Yes/No)	YES	YES
If yes,	were I	aw data generated before				*
applica	tion of	background corrections?		(Yes/No)	NO	NO
Comments:						
Ommeri Co.		· · · · · · · · · · · · · · · · · · ·			······	•
		· · · · · · · · · · · · · · · · · · ·				
contract, bo above. Rele submitted or transmission	oth tec ease of n diske n, if a	s data package is in compliant hnically and for completeness the data contained in this hatte (or via an alternate mean pproved in advance by USEPA) ager's designee, as verified	s, for other than nardcopy data pac ns of electronic has been authori	the condition that the charge and in the Lack by the Lack	ons detailed the computer-	eadable dat
ignature: _	Re	2130 11/30/07	Name: R	EDDY PAKANAT	I	·
)ate::		7/30 11/30/07	Title: Li	ABORATORY MA	NAGER EAD	000001

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ILM05.4

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

SDG NARRATIVE

SAMPLE RECIEPT & LOGIN

The following samples were received on the dates listed against them. The samples were logged in for analysis as listed.

CHEAGON	y bib ab libtea.						
EPA	LAB	DATE/TIME	AIRBILL NO.	ANALYSIS	Total # of	REMARKS	MATRIX
SAMPLE #	SAMPLE#	RECEIVED			Containers		
1					Received		
MH23Y1	0008712-01	11/12/07 10:02	795506075499	ICP-AES	1	MS/DUP	SOIL
MH23Z6	0008712-02	11/12/07 10:02	795506075499	ICP-AES	1		SOIL
MH23Z7	0008712-03	11/12/07 10:02	795506075499	ICP-AES	1		SOIL
MH23Z8	0008712-04	11/12/07 10:02	795506075499	ICP-AES	1		SOIL
MH23Z9	0008712-05	11/12/07 10:02	795506075499	ICP-AES	1		SOIL
MH24A0	0008712-06	11/12/07 10:02	795506075499	ICP-AES	1		SOIL

ICP-AES

Issue: Samples for case 36948 were received on 11/12/2007. TR/COC listed tag numbers do not match physical tag numbers.

Resolution: Per Region 8 Lab recorded the physical sample tag number on form DC-1 and proceeded with analysis of samples.

Issue: For samples received on 11/12, there was no temperature blank in the cooler. The cooler temperatures were determined to be 7 degrees. The following method was used to record cooler temperature. Removed ice between two sample containers and placed thermometers between them and stabilized for several minutes. The thermometer was not allowed to come in contact with any material except sample containers. The temperature of the shipping container was recorded on the TR/COC and form DC-1.

Resolution: Per direction from Region 8, the laboratory, proceed with the analysis of the samples.

Issue: There were no custody seals on any of the coolers.

Resolution: Per Region 8, proceed with the analysis of the samples.

Issue: Lab received one cooler for Case 36948 on 11/12/2007. This cooler was supposed to have been received by the lab on Friday (11/09/07) along with 5 other coolers but was not delivered by FedEX until Monday. Samples were received in zip lock bags. Ice in cooler had melted and seeped into zip lock bags and mixed with the sample. Lab believes the integrity of samples had been compromised due to water seeping into bags. Airbill # 795506075499. The affected samples were:

MH23Y1 MH23Z7

Resolution: Per Region 8, lab dried the affected samples and proceed with the analysis.

SMO was notified. Directive is enclosed, No other discrepancies of issues were noted during receipt and login.

A4 SCIENTIFIC, INC.

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SDG NARRATIVE

ICP-AES

Soil Samples were digested by Hot-Block technique (HS2) and analyzed using a Thermo Electron ICAP6500.

MS and DUP were performed on sample "MH23Y1" and they were within the QC limits.

Analytes with Serial Dilution percent difference not within the control limits are flagged with "E" on Form 1s and Form 8.

The following Samples were analyzed at a dilution for some elements to bring the concentration below the LDRs. The dilutions were made as below:

Sample ID	Dilution	Volume of digestate (ul)	Volume of 2% HNO3 (ul)	Final Volume (ul)
MH23Z6	1.2	8,333	1,667	10,000
MH23Z8	1.3	7,692	2,308	10,000
MH23Z9	1.4	7,143	2,857	10,000

The following equations are used for calculation of sample results from raw instrument output data:

ICP-AES

SOIL Samples:

Concentration (dry Wt.) (mg/kg) =
$$\frac{C*V}{W*S}*DF$$

Where,

C = Concentration (mg/L)

V = Final sample volume in Liters (L) (0.1L)

W = Wet sample weight (kg) (0.001kg)

S = % solids/100

DF = Dilution Factor

Lab Name A4 SCIENTIFIC, INC.	SAMPLE	LOG-IN SHE	ET		Page _ of _
Received By (Print Name)	sica-Sc	hulze		· <u>.</u>	Logyin Date
Received By (Signature)	Pissies	9 /	101		11.71-701
Case Number 36948		livery Group	p No. MH 23	. 41	NRAS Number
			Correspond	ing	
Remarks:	EPA Sample #	Aqueous Sample pH	Sample Tag #	Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s) Present(Absent* Intact/Broken	MH2391	NA	8311153	0008712- -01	1-ziplock bas Intact
2. Custody Seal Nos.	26		8 311169	1-02	
3. Traffic Present Absent* Reports/Chain of Custody Records or Packing Lists	27		8 311173	-03	
4. Airbill Airbill Sticker Present/Absents	28		8311171	-04)	
5. Airbill No. 7955060754 _ 99	+ 29		8311186	-05	
6. Sample Tags Present/Absent*	QH24A0	+	8311162	4-06	7
Sample Tag Numbers Listed Not Listed on Trafflc Report/Chain of Custody Record					
7. Sample Condition Intact/Broken*/ Leaking			:	:	
8. Cooler Present Absent Temperature Indicator Bottle	, , , , ,) (
9. Cooler Temperature 1/12/07 7/6 2		2			
10. Does information Yes No* on Traffic Reports/Chain of Custody Records and sample tags agree?					
11. Date Received at					·
12. Time Received 1002					
Sample Transfer					
Fraction Made Fraction					
Area # Cooler A Area #					25
Ву 28 Ву 28			:	///	2/07
on 11-12-07 -11-12-07		i i		. / .	
* Contact SMO and attach record of resolut	ion	· · · · · · · · · · · · · · · · · · ·		1/1	·
Reviewed By					<u> Labal</u>
Date NI\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Logbook Page No.	4	

LABORATORY NAME A4 SCIENTIFIC, INC. CITY/STATE THE WOODLANDS, TX	
CASE NO. BE 948 SDG NO. MH2391 SDG NOS. TO FOLLOW NA NRAS NO. NA	:
CONTRACT NO. EPW06057 SOW NO. ILM05.4	

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

			E NOS.		ECK
1.	Cover Page	FROM	1	LAB	REGION
2.	SDG Narrative	2	3		
3:.	Sample Log-In Sheet (DC-1)	<u>4</u>	4 6 9		$\frac{\mathcal{L}}{\mathcal{L}}$
4.	Inventory Sheet (DC-2))	· <u>5</u>	6	~	
5.	Traffic Report/Chain of Custody Record(s)	7	9		\sim
	Inorganic Analysis	10	15	_	1/
6.	Data Sheet (Form I-IN)	10	15		<u></u>
7.	Initial & Continuing Calibration Verification (Form IIA-IN)	16	24		
₿	CRQL Standard (Form IIB-IN)	25	32	1	
9.	Blanks (Form III-IN)	<u>33</u>	39		V
10.	ICP-AES Interference Check Sample (Form IVA-IN)	40	46	~	~
11.	ICP-MS Interference Check Sample (Form IVB-IN)	NA	NA		—
12.	Matrix Spike Sample Recovery (Form VA-IN)	47	47		
13.	Post-Digestion Spike Sample Recovery (Form VB-IN)	NA	NA	_	
14.	Duplicates (Form VI-IN)	48	48		V
15.	Laboratory Control Sample (Form VII-IN)	<u>49</u>	49		1
16.	ICP-AES and ICP-MS Serial Dilutions (Form VIII-IN)	50	50	_	1
17.	Method Detection Limits (Annually) (Form IX-IN)	51	53		V
18.	ICP-AES Interelement Correction Factors (Quarterly) (Form XA-IN)	<u>54</u>	54	_	\checkmark
19.	ICP-AES Interelement Correction Factors (Quarterly) (Form XB-IN)	55	5 <u>5</u>		~
20.	ICP-AES and ICP-MS Linear Ranges (Quarterly) (Form XI-IN)	56	56	-	\bigvee
21.	Preparation Log (Form XII-IN)	<u>57</u>	57		1/
	Analysis Run Log (Form XIII-IN)	58	64		
				.77	and the same of th

		<u>PAGE</u> FROM			BECION .	
		<u>F ROM</u>	<u>10</u>	LAB	REGION	
23.	ICP-MS Tune (Form XIV-IN)	<u>NA</u>	<u>NA</u>			
24.	ICP-MS Internal Standards Relative Intensity Summary (Form XV-IN)	-	100	_	/	
25.	ICP-AES Raw Data	<u>65</u>	681		1/	
26.	GFAA Raw Data (If Applicable)	NA	NA	11111111		-
27.	ICP-MS Raw Data	+	+		•	
28.	Mercury Raw Data	+		_		
29.	Cyanide Raw Data	682		_		
30.	Preparation Logs Raw Data		735		$\frac{V}{\lambda}$	
31.	Percent Solids Determination Log .	<u>736</u>	736	_	1	
32.	USEPA Shipping/Receiving Documents Airbill (No. of Shipments)	7 <u>37</u> 738	737	<u> </u>	1/	
	Sample Tags	738	739			
	Sample Log-In Sheet (Lab)	<u>740</u>	<u>740</u>		1	
33.	Misc. Shipping/Receiving Records (list all individual records)	NA	NA			-*
	Telephone Logs	<u>70 P</u>	1			
	NA 	<u> </u>	主	_		
34.	Internal Lab Sample Transfer Records &					
	Tracking Sheets (describe or list)				1	
	Custody CospecK	741	741			
	NA	NA	NA		1	
35.	Internal Original Sample Prep &	-	,			
	Analysis Records (describe or list)	,				
	Prep Records Digitation Logs	682	<u> 682</u>			
	Analysis Records Rundos	<u>683</u>	693	_	\sim	
	Description Standard preplos	694	735			
36. (Other Records (describe or list)			. —		
	Telephone Communications Log	NA	NA	~		
	<u>Emails</u>	742	744		1/	
	NA	NA	NA			•
		<u> </u>	<u>F-K</u>	<u> </u>		
37. C	comments:			<u></u>	-	
		8			_	
		30/07			_	•:
Compl (CLP	Lab) J. Schulg J. Schu	Print Name &	e Custodia	n 11/31	167 (Date)	
Audit (USEP	ed by Can Som	Can		W	1217	(0)
	(Signature)	(Print Name & 1	ritle)		(Date) l	~/

SAMPLE DELIVERY GROUP (SDG) COVER SHEET

SDG Number	r:	MH23Y1				
	D ICP-A	ES Analysis		☐ ICP-MS	Analysis	ľ
Laboratory	Name:	A4 SCIENTIFIC	, INC.	Laboratory	Code:	A4
Contract N	To.:	EPW0605	7	Case No.:		36948
Analysis F	Price:			SDG Turna	round:	21 days
Modified A	nalysis	(if applicable)	<u>:</u>			
Modificati	on Refer	ence No.:			}	
г	EPA S	Sample Numbers in S	DG (Listed	in Numerical C	rder)	
	1) MH23Y1	7)	13)	19)		
	2) MH23Z6	8)	14)	20)		: : :
	3) MH23Z7	9)	15)	21)		
	4) MH23Z8	10)	16)	22)		
	5) MH23Z9	11)	17)	23)		
	6) MH24A0	12)	18)	24)		
•						
,						
		1	1			
	MH23				124A0	
First 8	Sample in	SDG		Last Sample in	SDG	
	11/12/	/2007		11/1	12/2007	
First	Sample Rec	eipt Date	,	Last Sample Re	reint Date	···

Note: There are a maximum of 20 **field** samples [excluding Performance Evaluation (PE) Samples] in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Jusica Shulge Signature

SEPA	USEPA C Inorgani		t Laboratory ic Report & (Program Chain of Custody	Record		Case No: 36948 DAS No:			
Date Shipped:			Chain of Custo		Sampler		SDG No	· <i>MH23</i> Ib Use Only	<i>YI</i>	
Carrier Name:	FedEx		Relinguished By	(Date / Time)	Signature:	(Bate /Time) SAAA	4		PW0605	7
Aîrbill:			-02			· / / / / / / / / / / / / / / / / / / /	Lab Con	itract No: <u>E</u>	~ WUGUS	<u></u>
Shipped to:	A4 Scientific		1 Uhris Hay		Janna Simonsen "	/06/07	Ünit Pric	ce:		
	1544 Sawdust Ro Suite 505	ad	2 Janna Si	MAII FO/8/11 NOONOM		\rightarrow	Transfer	To:		
	The Woodlands T	X 77380	3	()	01 1 0		Lab Con	tract No:		
	(281) 292-5277		4		Dehre 111	12/01/002	Unit Pric		611/12	h9
INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLI DATE/TIMI		ORGANIC SAMPLE No.	FOR LAB USE O Sample Condition Or	
MH23X6	Surface Soil (0"-12")/	M/G	TM (21)	TAG126 (1)	UE27-CNTY-0.6	S: 11/1/2007	16:00		* _ *	
MH23X7	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG127 (1)	UW03-47-0.5	S: 11/1/2007	9:30			
MH23X8	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG128 (1)	UW03-47-1.0	S: 11/1/2007	9:45			
MH23X9	Chirls Hayes Surface Soil (0"-12")/	M/G	ТМ (21)	TAG129.(1)	UW05-47-0:5	S: 11/1/2007	14:20		;	
MH23Y0	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG130 (1)	UW08-47-0.5	S: 11/1/2007	18:50			
MH23Y1	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG131 (1)	UW09-47-0.5	S: 11/1/2007	12:00	14000	8712-01	Indi
MH23Y2	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG132 (1)	UW11-47-0.5	S: 11/1/2007	12:05	•		
MH23Y3	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG133 (1)	ÜW1 4-4 7-0.5	S: 11/1/2007	8:30			
MH23Y4	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG134 (1)	UW16-47-0.5	S: 11/1/2007	11:15			
MH23Y5	Chris Hayes Surface Soil (0"-12")/ Chris Hayes	M/G	TM (21)	TAG135 (1)	UW17-47-0.5	S: 11/1/2007	11:25			
hipment for Case omplete?N	Sample(s) t MH23W6,		or laboratory QC:	Additional Sample	r Signature(s): 	Cooler Tempera Upon Receipt:	iure	Chain of Custody	Seal Number:	7
Analysis Key:	Concentra	tion: L=1	Low, M = Low/Medium, I	H = High Type/D	esignate: Composite = C, G	mb = 6 11/12	107	Custody Seal Inta	act? Shipment	Iced?U

TR Number:

⊕EPA			t Laboratory ic Report & (Case No: 36948 DAS No: SDG No: MH 23 41					
Date Shipped: Carrier Name: Airbill:	FedEx A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277		Chain of Custody Record Relinquished By (Date / Time) 1 Chris Hayes 11/6/07 8AM 2 Janna Stronsen 11/8/07 11AM 3		Sampler Signature: A Complet Time) 8AM Janna Simonsen W/G/07 Dahwa 11/12/07 1002		For Lab Use Only		
Shipped to:									38 11467
INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS' TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLL DATE/TIME	ECT ORG		
MH23Z6	Surface Soil (0"-12")/	M/G	TM (21)	TAG146 (1)	UW30-47-0.5	S: 11/1/2007	13:30	0008712	-02 Intac
MH23Z7	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG147 (1)	UW33-47-0.5	S: 11/1/2007	10:20) -	03
MH23Z8	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG148 (1)	UW36-47-0.5	S: 11/1/2007	13:50	-	-04
MH23Z9	Chris Hayes Surface Soil (0"-12")/	M/G	TM (21)	TAG149 (1)	UW52-47-0.5	S: 41/1/2007	10:35		-05
MH24A0	Chris Hayes Surface Soil (0"-12")/ Chris Hayes	M/G	TM (21)	TAG150 (1)	UW55-47-0.5	S: 11/1/2007	13:40	b -	-0b

Shipment for Case	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):		Chain of Custody Seal Number:	
Shipment for Case Complete?N	MH23W6, MH23Y1	70/1/2/07	Upon Receipt: 7 %	- 31/12/07	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	25/12/07	Custody Seal Intact? Shipment Iced?	
TNEE CLP TAL Total Me	tals		4-7		

TR Number: